

# SONDES USE OF APPLIED TECHNOLOGY FOR REAL-TIME WATERSHED MONITORING

SALT RIVER PROJECT

WESTCAS FALL CONFERENCE  
OCTOBER 26TH, 2016

SRP WATER QUALITY SERVICES

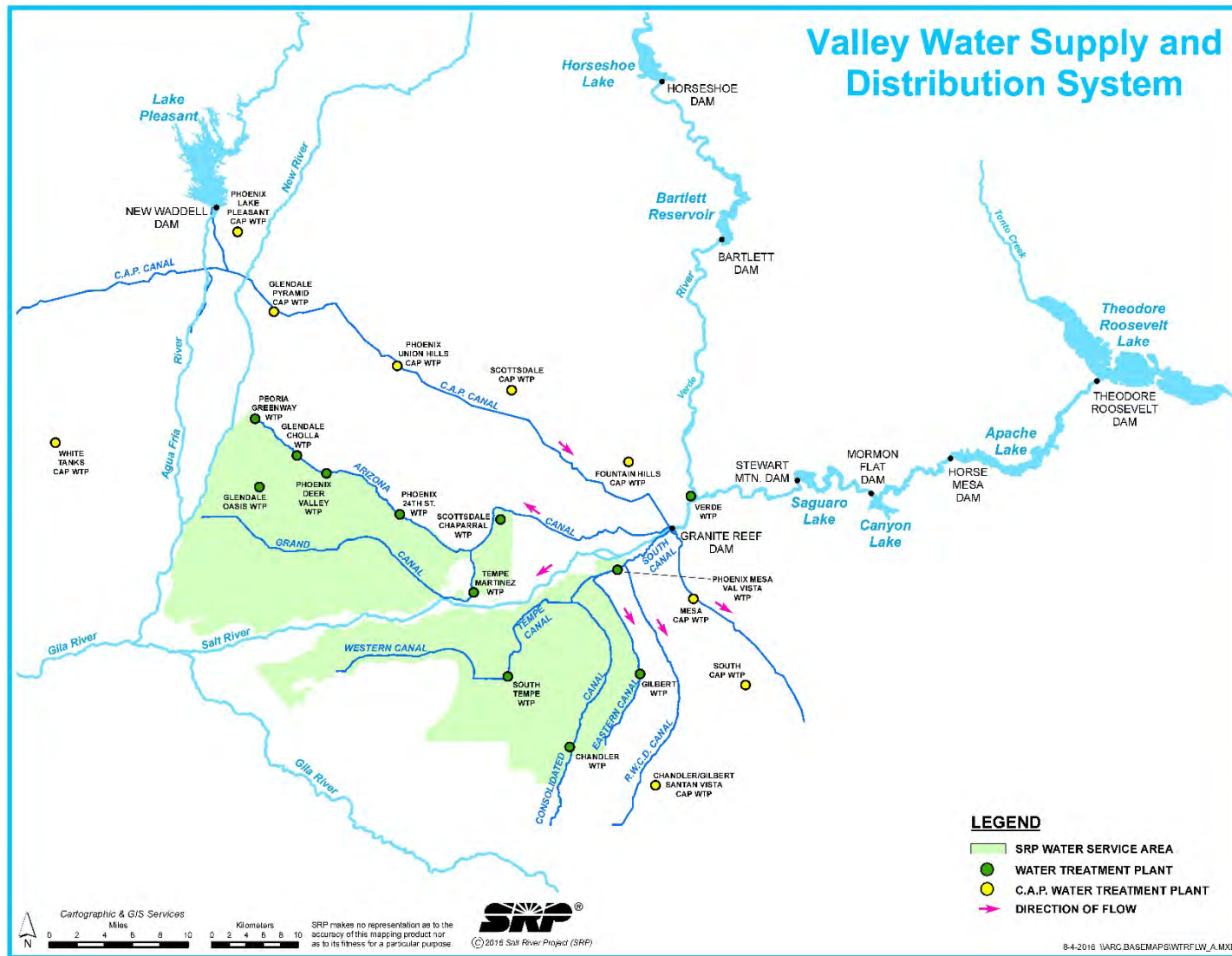
# SRP Water Quality Services

- Salt River Project Watershed and Supply System
- SRP Real-time Water Quality
  - History
  - THE Sondes
  - Data “Viewer”
- The Future of SRP Real-time Water Quality

# The SRP Watershed



# SRP/Valley Water Supply System



# SRP Water Quality Services

## Real-time Water Quality History

- 80's-90's "Testing"...
- ~Early 2000's First Generation Sondes
- ~Late 2000's Second Generation Sondes
- 2014-2016 System-wide Upgrade - Customer Involvement



# SRP Water Quality Services

- 2016-17 Upgrade
  - Installations planned Fall 2016 (on-going Today!)
    - Turbidity
    - pH, Conductivity, Temperature
    - Dissolved Oxygen
    - Algae / Chlorophyll
    - UV254 (New)
    - Nitrate
    - Flow
- Service Utilized by Municipal Water Treatment Plants



# SRP Water Quality Services

## Water Quality Viewer



Mike Ploughe



Head of Canal Surface Water  
Verde River

Status  
On

Flow  
108 cfs

Preferred Unit  
of Measure:

☒ CFS ☐ GPM ☐ MGD

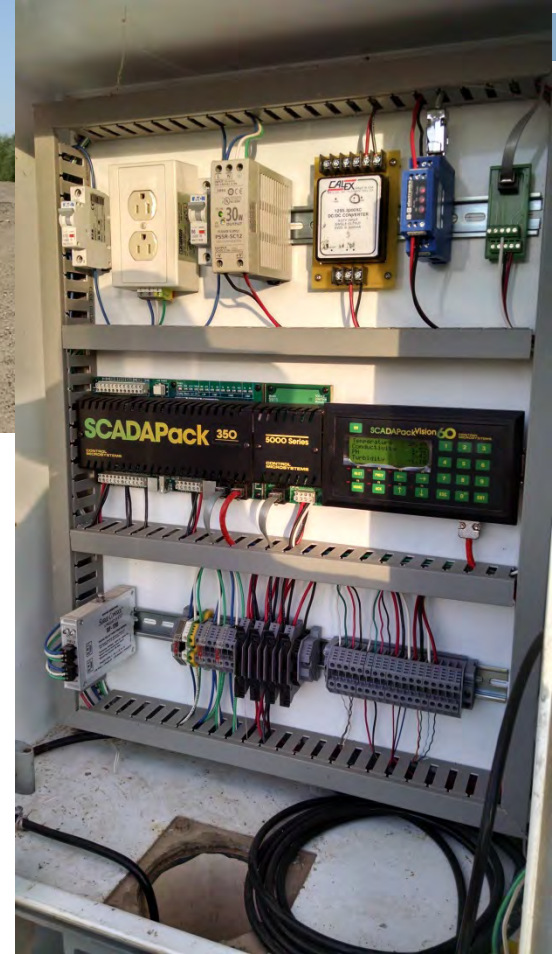
### Water Quality - Laboratory Analysis

DBCP	0.00 UG/L	04/07/2016
BR	0.019 MG/L	04/05/2016
B	0.148 MG/L	04/16/2016
CR6	0.001 MG/L	04/08/2016
AS	9.9800 UG/L	04/19/2016
F	0.299 MG/L	04/05/2016
PB	0.2100 UG/L	04/19/2016
NO3(N)	0.148 MG/L	04/18/2016
TOC (PHX rsIt)	3.440 MG/L	04/04/2016

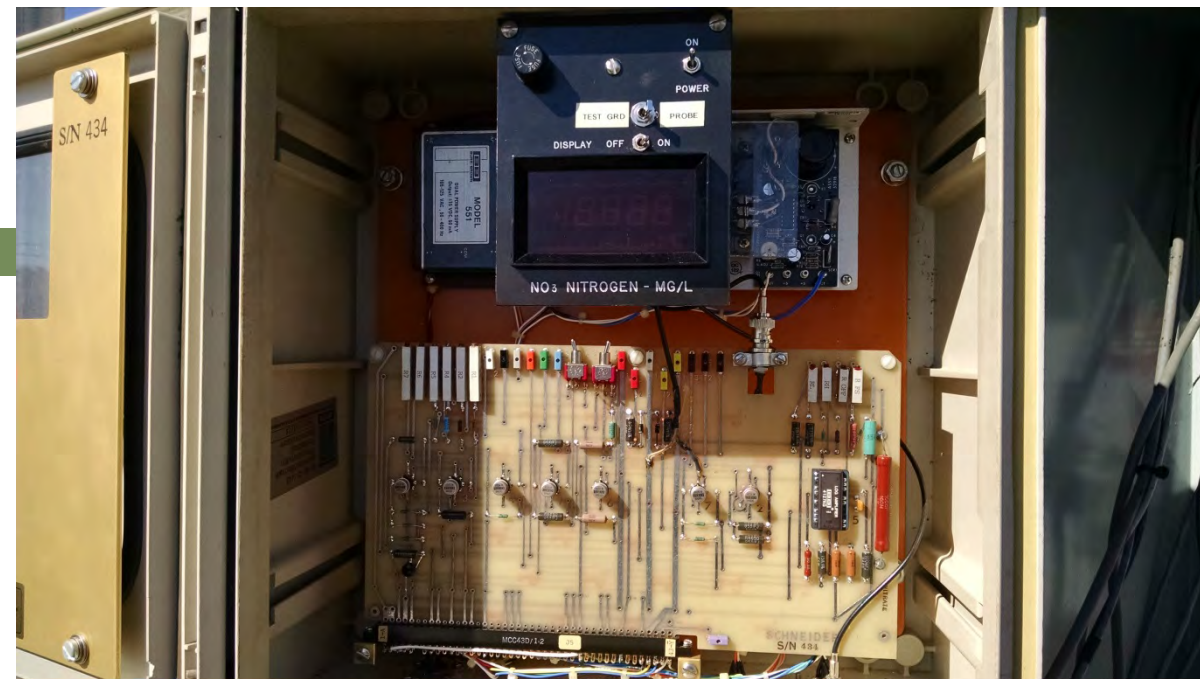
- Surface Water
- Well (On)
- Well (Off)
- Drinking Water Treatment Plant
- Water Quality Sensor
- Canal

2 miles 5 km  
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# Old Multi-Parameter Sensors



## Old Nitrate Sensors



# SRP Water Quality Services

## New Nitrate Probe Installation – Adapted to Existing Cabinet



# SRP Water Quality Services

## Water Quality Viewer

### Welcome to the SRP Water Quality Viewer

The SRP water system viewer provides information on the mix of water being delivered to drinking water treatment plants located on the SRP canal system. There is flow and water quality information, both current and from the recent past. There will be updated information on factors affecting the canal water such as planned shifts between surface water supplies and maintenance schedules. We ask for your input on the design of the website and its content to better provide information to assist you in operation of you water treatment plants.

#### News & Announcements

##### River Swap Fall 2016

10/19/2016 7:19 AM

Hello Viewer users. The seasonal river swap is currently underway. Please be prepared for turbidit ...

##### October 2016 River Swap - Verde Probe

9/29/2016 7:44 AM

The seasonal river swap to the Verde is planned for mid-October. SRP Water Transmissions Group will ...



#### Open the Viewer

Open the map viewer to view the water quality in the canal system



#### News & Announcements

Read about maintenance projects and service outages.



#### Help

Learn how to use the viewer. Common terminology used in this application are also defined here.

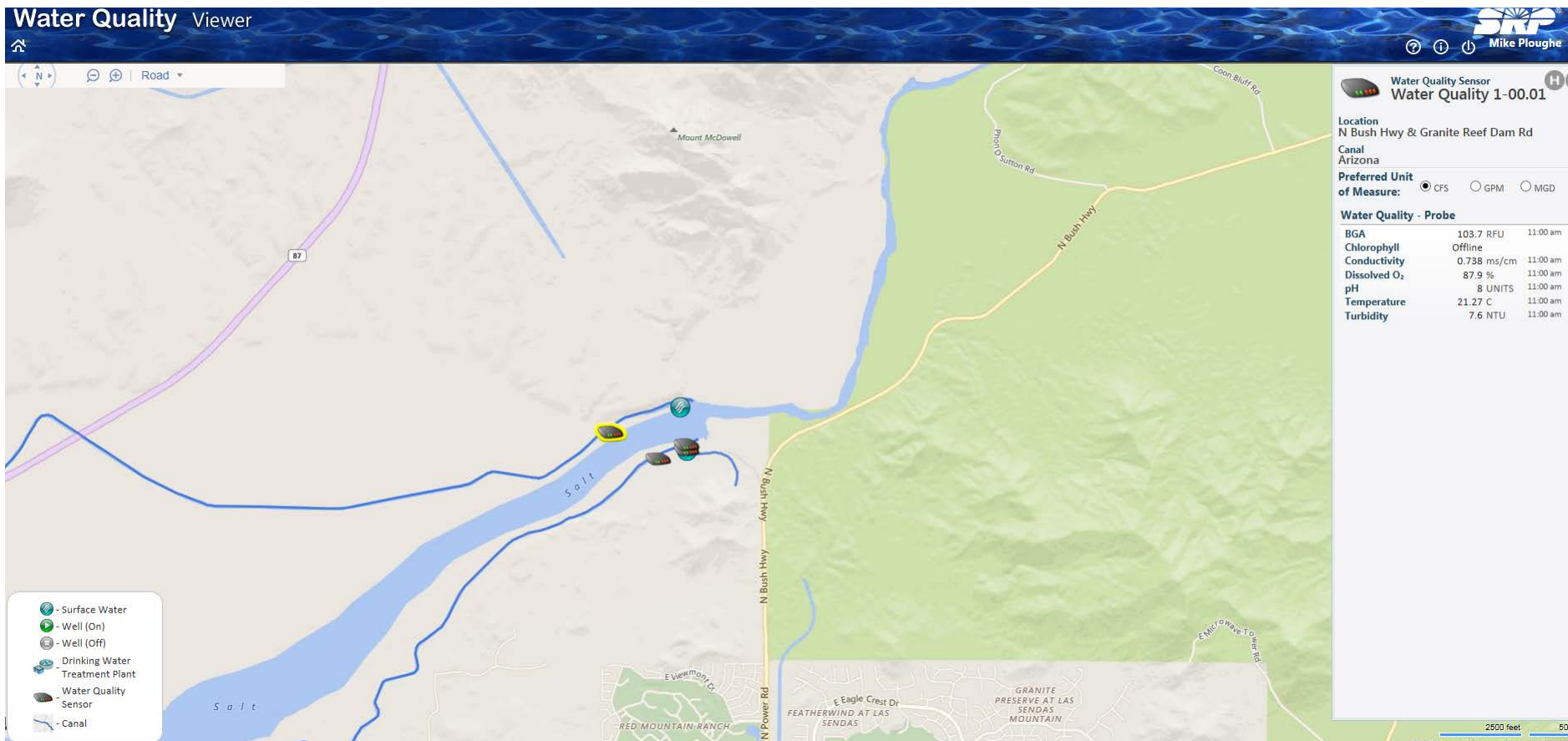


#### Update Contact Information

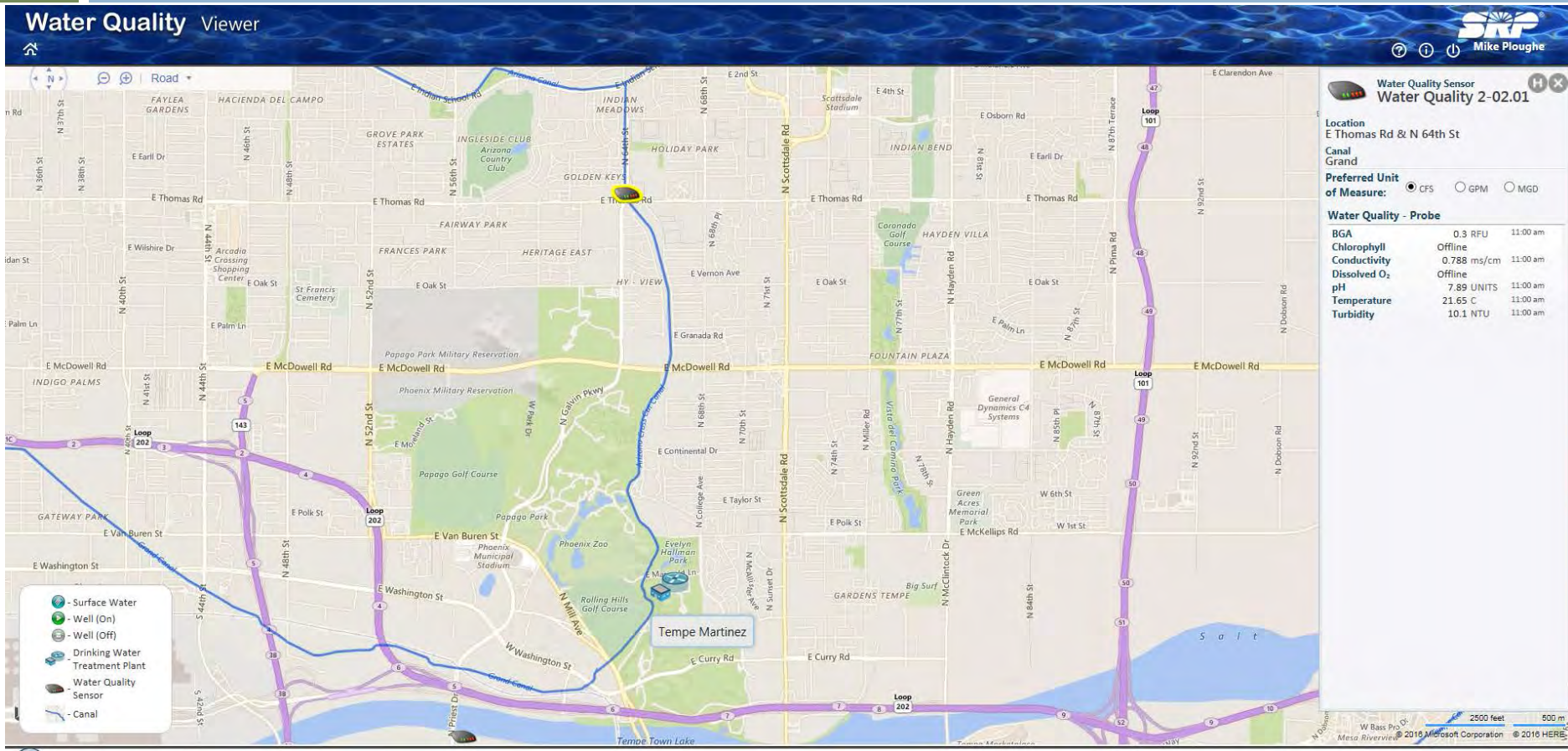
Update your contact information or password

API Key: 9a3fe1eb-a533-4f96-9f57-9021ee50bcd

# SRP Water Quality Services

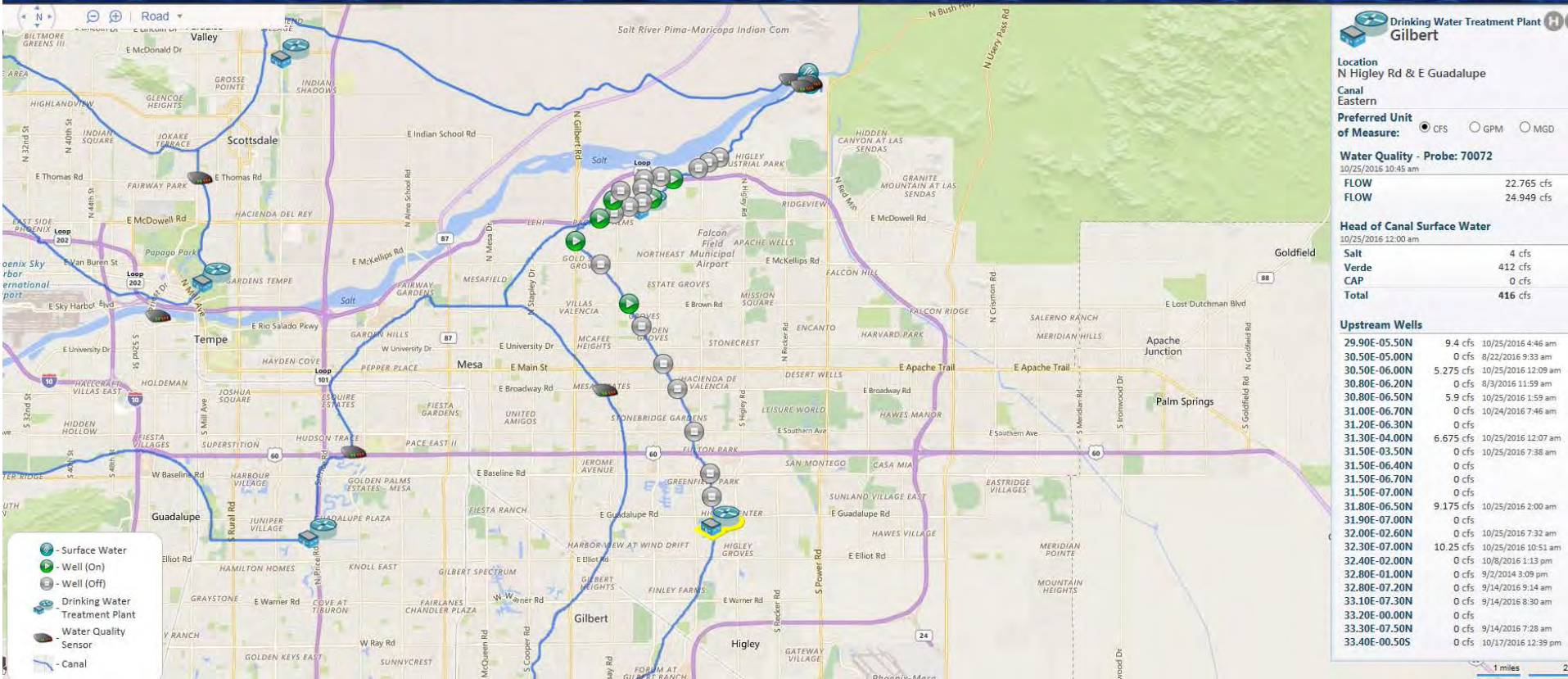


# SRP Water Quality Services



# SRP Water Quality Services

## Water Quality Viewer



# SRP Water Quality Services

- Re-Tooled SRP Water Quality Services
  - New Equipment
  - Improved Web Portal
  - Enhanced Customer Service
  - Improved Reliability
  - Driven by Customer Input

# SRP Water Quality Services

- The Future of SRP Real-time Water Quality?
  - Remote Watershed Monitoring
  - Enhanced Security / Surveillance Function
  - Mobile APP
  - Drones ?



# SRP Water Quality Services

- Service for Municipal Water Treatment Plant Customers
  - Real-time Data from Across the Canal System
  - Data Sharing with Participating Water Treatment Plants



Turbidity  
pH, Conductivity, Temperature  
Dissolved Oxygen  
Algae / Chlorophyll  
Flow  
UV254 (New)  
Nitrate (New)

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